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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Gerhard Babuke

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10/21/2003

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EXAMINER

MCCLLOUD, RENATA D

ART UNIT

PAPER NUMBER

2837

DATE MAILED: 10/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/868,317

Applicant(s)

BABUKE ET AL.

Examiner

Renata McCloud

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07/23/2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11, 12 and 14-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11, 12 and 14-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 11, 14, 16-19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eckel (U.S. Patent 5,780,785) in view of Eckel (U.S. Patent 3,712,413) and Fujiwara et al (U.S. 6,035,965).

{Note: Eckel (U.S. Patent 5,780,785) will be referred to as Eckel '785, and Eckel (U.S. Patent 3,712,413) will be referred to as Eckel '413, throughout this office action.}

Claims 11 and 21: Eckel '785 teaches a base layer (e.g. Figure 1, Item 10), columns positioned directly on the base layer and having a non-symmetrical distribution of height and cross section forming a moderator gap (e.g. Figure 1, Item 50), and the structured pre-form bodies comprising open-celled foam material having a rigid framework vibrating at low frequencies (e.g. Column 7, Lines 37-51), wherein each column has a one-side bevel cut on a side of the column (e.g. Figure 1, Item 76) cut on a room side (e.g. Figure 1, Item 20). However Eckel '785 does not teach the columnar height corresponds to the density of the base and the moderator gap being a one-side bevel. Eckel '413 teaches the moderator gap being a one-side bevel (e.g. Figure 5,

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between Items 10c and 14c). Eckel '785 and Eckel '413 do not teach the columnar height corresponds to the thickness of the base. Fujiwara et al teach a sound absorbing panel (e.g. Fig. 1) with columns (e.g. Fig. 1:2a), wherein the columnar height corresponds to the density of the base (e.g. Col. 8: 27-41). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Eckel '785 to include the teachings of Eckel '413 and Fujiwara et al. The advantage of this would be a blockage of the passage of sound waves through crevices between the columns.

Eckel '785, Eckel '413, and Fujiwara et al teach the limitations of claim 11. Eckel '785 also teaches:

Claim 14: the bevel cuts being configured to alternate in at least one of a vertical or a horizontal direction (e.g. Figure 1, Items 50 and 70).

Claim 16: the bevel cuts having an angle of roughly 35 degrees relative to the plane of the wall (e.g. Column5, Lines 40-45).

Claim 17: an acoustically transmissive cover of non-woven or woven material or soft cellular material supported on a plane of a bevel cut on a room side of the column (e.g. Abstract, Lines 1-4);

Claim 18: perforated panels in front of the pre-form bodies fastened to a wall by spacers (e.g. Column 4, Lines 54-56);

Claim 19: the pre-form bodies being self-supporting due to one of their material or shapes (e.g. Column 5, Lines 5-6).

3. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eckel '785, Eckel '413, and Fujiwara et al as applied to claim 11 above, in view of D'Antonio (U.S. Patent 5,665,943).

Claim 12: Eckel '785, Eckel '413, and Fujiwara et al teach the limitations of claim 11. Referring to claim 12, they do not teach the open-cell foam material comprising a melamine resin. D'Antonio teaches an open-cell foam material comprising a melamine resin (e.g. Column 3, Lines 14-16). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Eckel '785, Eckel '413, and Fujiwara et al to include the open-cell foam material being comprised of melamine resin as taught by D'Antonio. The advantage of this would be the increased thermo-resistance of the liner.

4. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eckel '785, Eckel '413, and Fujiwara et al as applied to claim 11 in view of Hayashi et al (U.S. Patent 5,892,188).

Claim 15 Eckel '785, Eckel '413, and Fujiwara et al teach the limitations of claim 11. Referring to claim 15, they do not teach the bevel cuts being shortened and flattened by up to 30 mm. Hayashi et al teach bevel cuts being shortened and flattened by up to 30 mm (e.g. Column 4, Lines 48-50, Figure 26). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sound absorbing device taught by Eckel '785, Eckel '413, and Fujiwara et al to include

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shortening and flattening the bevel cuts up to 30 mm as taught by Hayashi et al. The advantage of this would be a non-flammable, compact and lightweight liner that absorbs sound at 20dB in a frequency band of 1GHz to 30GHz.

5. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eckel '785, Eckel '413, and Fujiwara et al as applied to claim 11 above, in view of Inoue et al (U.S. Patent 6,373,425).

Claim 20: Eckel '785, Eckel '413, and Fujiwara et al teach the limitations of claim 11. Referring to claim 20, Eckel '785 teaches the base layer is fastened on a rear side to vibrating metal sheets (Fig. 2:122) of a composite panel resonator (Fig. 2:120). They do not teach teaches the base layer attached by an adhesive bond, with a lateral spacing of roughly 200 mm being provided between the metal sheets. Inoue et al teach a base layer attached by an adhesive bond (Fig. 7:5; Col. 7:43-45), with a lateral spacing of roughly 200 mm being provided between the metal sheets (Fig. 7:2, there is roughly 200 mm between two non-adjacent clusters of 4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sound absorbing device taught by Eckel '785, Eckel '413, and Fujiwara et al to make the base layer attached by an adhesive bond, with a lateral spacing of roughly 200 mm being provided between the metal sheets as taught by Inoue et al. The advantage of this would be an absorber that is easy to manufacture and use.

Response to Arguments

6. In response to applicant's argument that Eckel '785 does not teach a non-symmetrical distribution of height and cross section, referring to Fig. 1 of Eckel '785, spire 62 has a height at 64 that is different from the height at approximately 54. This teaches a nonsymmetrical distribution of height, and also cross-section should the spire be cut in half-length wise in the direction of 2 in Fig. 1. There is nothing in applicant's claim language that would preclude the examiner from reading Eckel '785 as meeting the limitations of columns having non-symmetrical height and cross section.

In response to applicant's arguments that Eckel '413 does not suggest why configuring members 10 and 14 provides for sound wave absorption, applicant is arguing against the reference individually. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

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Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Renata McCloud whose telephone number is (703) 308-1763. The examiner can normally be reached on Mon.- Fri. from 8 am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Nappi can be reached on (703) 308-3370. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Renata McCloud
Examiner
Art Unit 2837

RDM


MARLON T. FLETCHER
PRIMARY EXAMINER